

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A filamentous fungus transformed with a heterologous sequence of DNA, the fungus being capable of expressing the heterologous DNA, characterised in that the heterologous DNA is under the control of a filamentous fungus transcription promoter which is substantially active later than stage 1 of the development of the fruiting body of the fungus and which is substantially up-regulated during development of the fruiting body, between the button stage, later than stage 1, and the veil-break stage.
2. (previously presented) A fungus according to claim 1, wherein the promoter is active only from veil-break onwards during the development of the fruiting body of the fungus.
3. (currently amended) A fungus according to claim 1 [or 2], wherein the promoter is active only during stages 4 to 7 of the development of the fruiting body of the fungus.
4. (currently amended) A fungus according to claim 1 [any preceding claim], which is *A. bisporus*.
5. (currently amended) A fungus according to claim 1 [any preceding claim], wherein the promoter is obtainable from the cDNA sequence of SEQ. ID NO. 11.
6. (currently amended) A fungus according to [any of claims 1 or 4] claim 1, wherein the promoter comprises the sequence of SEQ ID NO 12, or a mutation or variant

thereof, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.

7. (currently amended) A fungus according to [any of claims 1 or 4] claim 1, wherein the promoter comprises the sequence of SEQ ID NO 13, or a mutation or variant thereof, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.
8. (currently amended) A fungus according to [any preceding claim] claim 1, wherein the DNA is operably linked with a terminator comprising the sequence of SEQ ID NO 35, or a mutation or variant thereof, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.
9. (currently amended) A fungus according to [any preceding claim] claim 1, wherein the DNA is operably linked with a terminator comprising the sequence of SEQ ID NO 36, or a mutation or variant thereof, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.
10. (original) A fungus according to claim 1, wherein the DNA is operably linked with a promoter comprising the sequence of SEQ ID NO. 12 and a terminator comprising the sequence of SEQ ID NO 35, or a mutation or variant of either, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.
11. (original) A fungus according to claim 1, wherein the DNA is operably linked with a promoter comprising the sequence of SEQ ID NO. 13 and a terminator comprising the sequence of SEQ ID NO 36, or a mutation or variant of either, or a sequence which hybridises thereto under conditions of at least 60% sequence identity.
12. (currently amended) A fungus according to [any preceding claim] claim 1, wherein a selectable marker is linked with the heterologous DNA.

13. (currently amended) A fungus according to [any preceding claim] claim 1, wherein the heterologous DNA is native DNA.
14. (currently amended) A fungus according to [any preceding claim] claim 1, wherein the heterologous DNA is selected such as to affect characteristics of mushroom crop production.
15. (currently amended) A fungus according to [any preceding claim] claim 1, wherein the heterologous DNA encodes: antibodies, including other diagnostic material; secondary metabolites, such as lectins, pesticidal compounds such as *Bacillus thuringiensis* toxin (Bt toxin); therapeutic compounds such as vaccines, steroids, heterocyclic organic compounds; biological macromolecules, such as interferon, endostatin and insulin; and medical enzymes, such as thrombolytics and cerebrosidases.
16. (currently amended) A method for the production of a substance expressible by a DNA sequence, wherein the sequence is operably associated with a filamentous fungus transcription promoter as defined in [any preceding claim] claim 1, the sequence and promoter being expressibly incorporated in a filamentous fungus, the fungus being cultured to fruition and the product being harvested.
17. (currently amended) A method for the production of a substance expressible by a DNA sequence, wherein the sequence is operably associated with a filamentous fungus transcription promoter as defined in [any of claims 1 to 15] claim 1, the sequence and promoter being expressibly incorporated in a filamentous fungus, the fungus being cultured to fruition and the product being harvested, and wherein the DNA and/or fungus is as defined in [any of claims 1 to 15] claim 1.